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IS 10843 (1984): Glossary of terms for crushers [MED 17: Chemical Engineering Plants and Related Equipment]



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“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

GLOSSARY OF TERMS FOR CRUSHERS

- 1. Scope** — Covers the definitions of terms commonly used in the field of crushing operations.
- 2. Definition**
 - 2.1 Access Door** — Refers to the covered opening in frame provided for inspection and access to interior for maintenance.
 - 2.2 Attrition** — Reduction of material by a grinding or rubbing action between material and/or hard surfaces.
 - 2.3 Automatic Lubrication** — Either splash or circulating oil or other lubricant, non-manual lubricating system. It may have filter, sight glasses and temperature and pressure alarm systems.
 - 2.4 Backlash** — Total clearance between teeth of pinion and gear at pitch line.
 - 2.5 Bearing Housing** — Enclosure for main bearings mounted on crusher frame.
 - 2.6 Bearing Retainer** — Means of locating a bearing axially.
 - 2.7 Bearing Seal** — Device to retain lubricant and exclude foreign matter. Common types are labyrinth, piston ring, lip seals, cap, slinger rings, shrouds.
 - 2.8 Blocking** — A single piece of material too large to enter the crushing chamber.
 - 2.9 Bridging** — Multiple pieces of material wedged or covering the feed opening of the crusher and preventing entry of additional material.
 - 2.10 Check Plate** — Replaceable wearing surface for sides of crushing chamber. Usually of manganese or abrasion-resistant material.
 - 2.11 Choke Feed** — A condition whereby the feed completely fills the crushing chamber.
 - 2.12 Circulating Oil System** — System in which lubricating oil, after passing through the bearings, is returned to a reservoir and recirculated for the purpose of cooling or heating and filtering.
 - 2.13 Closed Circuit Crushing** — System in which the oversize material is separated from the product and returned to the crusher.
 - 2.14 Crushing Chamber** — The area of the crusher where crushing takes place.
 - 2.15 Coupling** — A device used to direct-connect a crusher to a driving mechanism.
 - 2.16 Drive** — Any device used to transmit rotating force from the power unit to the crusher shaft, such as V-belt, flat-belt, and coupling.
 - 2.17 Drive Guard** — Safety enclosure for the drive.
 - 2.18 Expansion Bearing** — Free or floating bearing on one end of a shaft to allow for expansion and contraction of the shaft.
 - 2.19 Feed Opening** — The inlet opening of the crusher where material enters the crushing chamber.

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- 2.20 Fines** — Material having particle size smaller than a specified opening.
- 2.21 Finished Product** — The resultant material after it has been processed.
- 2.22 Flywheel** — A heavy, flat or grooved wheel or sheave used to store and release energy.
- 2.23 Friable** — Material that fractures easily.
- 2.24 Grindability** — An index for the resistance of material to size reduction.
- 2.25 Grizzly** — A heavy duty screening surface consisting of a series of spaced bars, rail, or pipe members; may be stationary, rotating or vibrating.
- 2.26 Guard** — A protective shield covering exposed moving elements of machinery.
- 2.27 Lubrication** — Usually oil or grease.
- 2.28 Mobile Crushing Units** — Moveable crushing units with crawler, rail, walking beams or pads, rubber, etc. These can be towed or self-propelled.
- 2.29 Nominal** — Term frequently used in describing product size, and denoting that at least 90 percent of product is smaller than the size indicated.
- 2.30 Oil Retainer** — A seal to prevent loss of lubricant.
- 2.31 Open Circuit Crushing** — One pass through the crusher.
- 2.32 Pillow Block** — A self-contained bearing housing separate from the frame of the crusher.
- 2.33 Plugging** — Blockage restricting flow of material.
- 2.34 Portable Crushing Units** — Units which can be moved on the highway with minimum disassembly.
- 2.35 Pulley, Flywheel** — Usually the large, heavy, driven pulley designed to transmit energy. Often grooved to take a V-belt drive.
- 2.36 Reduction Ratio** — Relationship of the top size of feed to the top size of the crusher product.
- 2.37 Regulated Feed** — Flow of material when controlled.
- 2.38 ROM** — Run of mine.
- 2.39 ROQ** — Run of quarry.
- 2.40 Scalping** — Removing from crusher feed most of the undersize material.
- 2.41 Semi-Portable Crushing Units Skid or Base Mounted** — Units which are mounted on a structural steel frame having legs or supports to grade.
- 2.42 Shear Crushing** — Reduction of material by a cutting action between two hard surfaces.
- 2.43 Thrust Bearing** — Any plain or anti-friction bearing designed to accept thrust loads.
- 2.44 Top Size** — The largest particle size in feed or product.
- 2.45 Tramp Iron** — Any uncrushable metal in the crusher feed.

EXPLANATORY NOTE

In the preparation of this standard, assistance has been derived from ANSI/CAPP A No. 78 1979 'Crusher terminology', issued by Crusher and Portable Plant Association.